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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/241,450 | 02/02/1999 | JOHN O. RUID | 1-8380 | 8758 |
| 8933 | 7590 | 05/18/2006 | | |
| DUANE MORRIS, LLP IP DEPARTMENT 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196 | | | | |
| EXAMINER RUDDOCK, ULA CORINNA | | | | |
| ART UNIT | | | PAPER NUMBER | |
| 1771 | | | | |

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 09/241,450 | Applicant(s) RUID ET AL. | |
| | Examiner Ula C. Ruddock | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 29-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 29-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 2, 2006, has been entered.

2. The Examiner has carefully considered Applicant's amendment and accompanying response filed March 2, 2006. The rejections in view of Green et al. (US 5,397,631) and Meier et al. (US 5,169,700) have been overcome. However, after an updated search, additional prior art has been found which renders the invention as currently claimed unpatentable for reasons herein below.

Claim Objections

3. Claim 35 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 35 requires that the composite be flexible; however, independent claim 1 already requires that the composite be flexible.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 6, 7, 8, 9, 29, 30, 31, 33, 35, 36, 37, 38, 39, 40, 41, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ray, Jr. et al. (US 4,101,700). Ray, Jr. et al. disclose a flexible, thermally insulating duct liner comprising a fibrous thermal insulation layer and a coating. The fiberglass blankets are up to about 3 inches thick and have densities below 3.5 lb/ft³ (col 1, ln 4-21). The product is very soft, resilient, and easily folded (col 1, ln 60-62). The organic fibrous web disclosed by Ray, Jr. et al. can be a second fiberglass mat (col 2, ln 60-68). A coating, comprising polyvinyl acetate as a binder, is applied to the fiberglass mats (col 3, ln 43-45). With regard to Applicant's limitation of a "roughly textured face," it is the Examiner's position that resin bonded glass fibers inherently have a rough surface. Therefore, because the fibrous mat of Ray, Jr. et al. contains a binder [0018], it would have a rough surface.

Ray, Jr. et al. disclose the claimed invention except for the specific teaching of how to make the insulation composite. Ray, Jr. et al. also fail to clearly disclose that the cover layer has a thickness dimension which is substantially uniform and in which the cover layer is permanently embedded into the body layer from the roughly textured face to a depth less than the thickness dimension. Ray, Jr. et al. also fail to disclose that the thickness dimension of the cover layer has a variation of at most 1 mm and that the thickness dimension is in the range of about 0.01 to 1mm and that the cover layer extends into the body layer to a distance from the roughly textured face at most about 95% of the thickness dimension,

It is not seen how Applicant's method of making the insulation composite significantly affects the chemistry or structure of the insulation composite itself. It is the examiner's position that the thermally insulating duct liner of Ray, Jr. et al. is identical to or only slightly different than the claimed insulation composite prepared by the method of the claims, because both insulation material comprises a first and second nonwoven fiberglass layer and a cured coating. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). The Ray, Jr. et al. reference either anticipates or strongly suggests the claimed subject matter. In the event any difference can be shown for the insulation material of the product-by process of claims 29 and 38, as opposed to the product taught by the Ray, Jr. et al. reference, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results.

It should be noted that optimizing the coating thickness variation and the percentage of coating in the nonwoven mat are result effective variables. For example, the smaller the coating thickness variation greatly enhances the aesthetic value of the insulation board and decreases the chance of delamination. Therefore, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to have used a cover layer having a thickness dimension variation of at most 1 mm and a cover layer that extends into the body layer to a distance from the roughly textured face at most about 95% of the thickness dimension, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized these claimed measurements motivated by the desire to obtain an insulating composite that has enhanced aesthetics, decreased delamination, and increased strength and durability.

With regard to Applicant's limitation that the cover layer has a thickness which is substantially uniform and in which the cover layer is permanently embedded into the body layer from the roughly textured face to a depth less than the thickness dimension, it is the Examiner's position that it would have been obvious to one having ordinary skill in the art to have made the thickness of the cover layer be substantially uniform and to have permanently embedded the cover layer into the body layer to a depth less than the thickness dimension, motivated by the desire to create an insulating composite that has increased lamination strength.

6. Claims 5, 32, 34, 42, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ray, Jr. et al. (US 4,101,700), as shown above, in view of Shackel et al. (US 5,567,504). Ray, Jr. et al. disclose the claimed invention except for the teaching that the cover layer is an acrylic polymer and that the composite further comprises an outer layer made of a metal foil.

Schakel et al. (US 5,567,504) disclose a glass fiber duct board that is coated with a polymer latex coating to encapsulated glass fibers (abstract). The glass fiber blanket has flexibility and compressibility (col 1, ln 22-28). The coating used to encapsulate the glass fiber is a

polymeric acrylic latex coating. The opposite major surface of the duct board has a facing sheet comprising a metal sheet (col 3, ln 59-67 to col 4, ln 1-2). It would have been obvious to have used Schakel's acrylic latex coating as the coating on the glass fibers of Ray, Jr., motivated by the desire to increase the fire resistance of the duct liner. It also would have been obvious to have used Schakel's metal sheet as the outer layer on the duct liner of Ray, Jr., motivated by the desire to create a duct material that has increased strength.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 3-9, and 29-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

Ula Ruddock
Ula C. Ruddock
Primary Examiner
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